

January number of the *Quarterly Journal of Microscopical Science*.

RHIZOPODS IN AN APPLE TREE.—Freshwater rhizopods are beginning to be well known, but Prof. Leidy has lately discovered a number in an apple-tree. While waiting for a railway train, last December, his attention was attracted to a large-apple tree which had then quite recently been thrown down by a storm, and from the fork of its trunk he collected a small bunch of moss, which, on examining it carefully, he found to contain a number of rhizopods. Of these one was *Diffugia cassis*; it was abundant. Another, which occurred in smaller number, was *D. globularis*, and in addition, some specimens of *Trinema acinus*, *Euglypha alveolata*, and *E. brunnea*, were met with. The moss from which they were washed with filtered water was found at a distance of about eight feet from the ground (*Proceedings, Acad. Nat. Scien. Philadelphia*, 1877, p. 321). We hope this hint will not be lost by the investigators of our British or Irish rhizopods.

THE AERONAUTIC FLIGHT OF SPIDERS.—Many observations have been made on this singular phenomenon, but the Rev. H. C. McCook is pursuing his inquiries with a perseverance that succeeds in detecting many new details in the performance. Recently (October, 1877) he paid attention to groups of young wolf-spiders (*Lycosidæ*), which crowded the tops of railings in a meadow. Their faces were turned in the direction from which the wind was blowing; the abdomen in each was elevated at an angle of 45°, the claws brought in, and the legs stiffened, thus raising the body. From the spinnerets at the apex of the abdomen a single thread was exuded, and rapidly drawn out to several feet by the breeze. Gradually the foremost pair of legs sank to the level of the post, and the entire attitude became that of intense resistance. Then suddenly and simultaneously the eight claws were unloosed, and the spider mounted with a sharp bound into the air, and went careering across the meadow. As far as could be observed, it appeared that the spider took a voluntary leap at the moment of loosing its hold. One spider, by good hap, was followed through its flight. The position of the body was soon reversed, the head being turned in the same direction as the wind. The legs were spread out, and were united at the claws by delicate filaments of silk. After flying a distance of about eighty feet, the spider gradually settled down upon the meadow. The difficulty of this observation will be understood by entomologists, for it required exact suitability of position as to light, the limitation of the flight to a moderate height, and a comparative moderation of its speed. (*Proc., Acad. Nat. Sci. Philadelphia*, 1877, p. 308.)

TURKOMAN GREYHOUNDS.—The Jardin d'Acclimatation has lately been enriched (we learn from *La Nature*) with three Turkoman greyhounds of great beauty, the first specimens imported into Europe. The animals are known in the country under the name of Tazi, and are employed in catching hares, like the Sloughi in Algeria and the greyhounds in Persia. They are of noble aspect, and have great strength of muscle; their head is remarkably long and delicate in form. The hair on the body is short; but the ears (which are very large) are covered with long silken hair. Their legs are also covered with well-developed hair, and the contrast of this with the upper smooth part of the body is surprising at first sight; the dogs appearing as if they had large waving pantaloons, or reminding one of some kinds of fowl. One of the three dogs was obtained from the Kirghises of Emba, the two others at Samarkand (and by M. de Ujfalvy). We believe that it is among this breed that, as mentioned by Hamilton Smith, the *stop* greyhound is found so trained, that when a whole pack of them is in pursuit of a doubling hare, a stick thrown before it instantly produces a general halt, and one only is then signalled out to pursue the game.

GEOGRAPHICAL NOTES

CHINA.—Mr. E. C. Baber's long-deferred Report on the journey of the Grosvenor Mission through Western Yunnan, from Tali-fu to Têng-yüeh, contains much matter which is of interest from more than one point of view. The most important of his surveys is that of the route from Tali-fu to Têng-yüeh, as it connects Garnier's explorations with the work of Sladen's expedition, and thus puts Bhamo in topographical communication with Shanghai and Saigon. The survey next, but not much inferior, in importance, is the route from Yunnan-fu to Tali-fu, in which the track followed was different to Garnier's. Mr. Baber has also prepared a running survey of his route across China from Hankow to Têng-yüeh. His remarks on the native races are interesting, especially in regard to the Kutung people. What or where Kutung is he was unable to ascertain; he describes the men as of a dark reddish complexion, with rather prominent features, above the average height and well-proportioned, dressed in close-fitting woollen garments, which in some cases were neatly cut and handsomely embroidered. The women seen would have been considered handsome anywhere; paler in colour than the men, their oval intelligent faces reminded the observer of the so-called Caucasian type, and in every step and movement there was a decision and exactness very different from the motion of a Chinese. One of the women, too, was particularly remarkable for a peculiarity of her long hair, which was naturally wavy, a feature never met with among the Chinese. Mr. Baber was fortunate in seeing the quarterly fair at Tali-fu, at which some 5,000 people were present, many of them being Lolos, Shans, Thibetans, &c. At this stage of his journey he propounds a not improbable explanation of the term "golden teeth," as applied to the inhabitants, viz., that it arose from the discoloration of the teeth produced by chewing betel with lime. Mr. Baber's observations on the extent of the poppy cultivation will hardly be found encouraging by those who desire to see the consumption of opium put an end to, for he says that his party walked some hundreds of miles through poppies; and a similar remark applies to his account of the trade-route into Yunnan from Burmah. The valleys, or rather abysses, he says, of the Salween and Mekong must long remain insuperable difficulties, not to mention other obstacles between Yunnan-fu and Têng-yüeh. The members of Col. Sladen's expedition appear to have assumed that, when the latter place is reached, the obstacles to a highway into Yunnan have been surmounted, whereas the fact is that the difficulties begin at that place. Loth as most Englishmen are to admit it, Mr. Baber adds, the simple and evident approach to Eastern Yunnan is from the Gulf of Tonquin, but it by no means follows that the same holds true of the western part of the province. In conclusion we may mention that an interesting feature in Mr. Baber's report is his comparison of Marco Polo's narrative with his own experiences, and his verification in many respects of the Venetian's information respecting a country almost entirely unknown to Europeans.

PRJWALSKY'S JOURNEY TO LOB-NOR.—In the *Isvestia* of the Russian Geographical Society, and as Supplement 53 to Petermann's *Mittheilungen*, the narrative of Prjwalsky's journey from Kuldja to Lob-Nor and the Altyn-Dagh, is now published, with maps showing the route and the discoveries made. We have already referred to the results of this important journey between August, 1876, and July, 1877, a journey which the enthusiastic Dr. Petermann regards as the crown of Central Asiatic exploration, and as equal in importance to Stanley's journey down the Congo, or even the attainment of the Pole. Prjwalsky gives ample details as to what he saw along the route, and his observations will be of special value to the ethnologist as containing important

details concerning the various peoples he met with. The zoologist and botanist will also find much to interest them. Not only does he bring certain information on the Lob-Nor, which is little better than a marsh, apparently drying up, but also makes an important contribution to our knowledge of the great mountain plateau which separates India from Central Asia. The Lob-Nor basin forms the foot of the Kuen-luen and of the great plateau which stretches from the plains of India over the Himalayas, the Karakorum, the highlands of Khor, in an unbroken sweep to the basin mentioned. Close by the Lob-Nor this mountain rises like a wall out of the low plain, some of the lowest valleys having a height of 10,000 feet above the sea. From this northern slope on the Lob-Nor, at about 60° W. long., the plateau stretches away south, for 13° (850 miles) to its southern slope on the Indian plain. At the meeting, on February 20, of the Russian Geographical Society the Secretary read a letter from Col. Prijwalsky, dated Fort Zaisan, January 11. The traveller said that, after having seen the impossibility of penetrating into Tibet *via* Lob-Nor, he was compelled to try the indirect route *via* Guchen and Hami, whence he proposed to go south to Tsandam and to Hlassa, crossing the sources of the Blue River. Thus, he left Kuldja on September 9, and reached Guchen. As along the whole of the route to Guchen, which passes through the towns Shikho and Manas, there were Chinese troops, as also many *champany*s (convicts condemned to hard labour), Col. Prijwalsky followed another route, viz., to Lake Ebi-nor, thence north to the Saur Mountains, and thence to Guchen, along the route followed in 1875 by Col. Sosnovsky. Thus, he reached Guchen about the beginning of November, but here a serious illness compelled him to return to Zaisan, which he reached on January 13. A later telegram announced that the indefatigable traveller had recovered and that he was again on his way to Tibet.

MONGOLIA AND SIBERIA.—At the same meeting a letter from the traveller Potanin dated Bjisk, January 14, stating that he had arrived at the end of his Mongolian journey, after obtaining many hypsometrical and topographical data, as well as making rich botanical, zoological, and mineralogical collections. The Secretary of the Society gave a review of the activity of the Siberian department. Two expeditions were sent out by this department during the past year, one, which will be absent for several years, under the leadership of M. Czerski to investigate the shores of Lake Baikal geologically, the other conducted by M. Agapidin, to examine the flora of the district of Balagansk in the government of Irkutsk.

NEW GUINEA.—The Rev. S. Macfarlane has just sent home a report of a voyage which he made towards the close of last year from Murray Island to the east end of New Guinea, and in the course of which he visited several places previously unknown. He mentions having gone on shore near Killerton Point, not far from East Cape, where he found himself unable to communicate with the people except by signs, for they could not understand any of the dialects spoken at Teste Island, Port Moresby, and Murray Island, nor the Eastern and Western Polynesian languages, though upon inquiring the names of things, Mr. Macfarlane's companion thought he detected a resemblance to the Raratongan. The locality visited not suiting their purposes, the party went six or seven miles further to the eastward, and landed at the mouth of a river or mountain stream, where the hills slope down to within a short distance of the beach, and behind the village there is a well-wooded, fertile, and lovely valley. Mr. Macfarlane describes the neighbourhood as thickly populated, though the people are scattered in small villages within hailing distance of each other. Speaking generally, he says that the country about the east-end of New Guinea has a totally different appearance from that in

the vicinity of Port Moresby, and the contrast was very striking. The former looked lovely and luxuriant, like the South Sea Islands, whilst the latter had a barren, brown, parched appearance, as if two days' sail had brought the party into a new country in quite a different latitude. We hear that Mr. Andrew Goldie, to whose gold discoveries in New Guinea we have before alluded, has sent home to the Earl of Glasgow an account of his recent explorations, accompanied by a sketch map and several drawings. At Mr. Goldie's request, his Lordship has handed the papers to the Geographical Society, and they will probably be read at one of the meetings during the present session.

LAKE NYASSA REGION.—A paper was read at Monday's meeting of the Royal Geographical Society, by Mr. H. B. Cotterill, "On the Nyassa, and a Journey from the North-East to Zanzibar." In August last he met Capt. Elton and some friends at the south end of the lake, and ran up the west coast. They were detained some days under Mount Chombi, which he ascended, and found to be about 4,000 feet above the lake. The high land on the west of the lake was found to trend off in a north-westerly direction. They at last made a start with about fifty men. Their route crossed the Chombaka River. The whole of the country was covered with groves of banana. They procured other carriers and crossed the Chombaka Valley, crossing the river several times and passing two very beautiful little lakes. In crossing the Chombaka for the third time at a point where it flowed through a very deep ravine, they struck more towards the north. They found stretching away to the east and south-east a great plain bounded in the far distance by a towering range of mountains that evidently ran up from the eastern side of the Nyassa towards the north-west. The native name for these mountains and the surrounding country is Kondi. They had been gradually ascending since they left Nyassa, and when they reached Mazote's, they were at an elevation of about 6,000 feet above the sea. It was decided that some of them should push on to Mereri's Town. So Capt. Elton and he and another started off, and having crossed the Kondi Range, they found themselves on a great plateau, 7,000 feet high, called Uwanji, a splendid cattle country, watered by many streams. Crossing the Makesumbi River, they found themselves in an undulating country, covered with thick bush. There Capt. Elton began to break down, and at South Ushekhe breathed his last. They then had to traverse some 350 miles of the Ujiji caravan route, and on the last day of February reached Zanzibar.

INDO-CHINA.—Dr. G. Barrion, a French naval surgeon is about to undertake an exploring journey to the Indo-Chinese peninsula.

MR. STANLEY has announced to the Paris Geographical Society that he will visit Paris in June, before his departure for America, to receive the medal the Society has awarded him.

NOTES

ROBERT JULIUS V. MAYER, whose name is so intimately associated with the mechanical theory of heat, died at his native town, Heilbronn, on the 21st inst., in his sixty-fourth year. We can only intimate the event this week, but hope next week to be able to speak in detail of Mayer's life and work.

IN connection with our article on Harvey in this number, we may remind our readers that for some time a movement has been on foot for the erection of a statue to Harvey in his native town, Folkestone. Only 800*l.*, half the sum requisite, has been obtained, and we are sure many of our readers, on being made aware of the deficiency, will be glad to help to fill it up. Donations may be sent to the hon. treasurers of the fund, Sir George Burrows and Mr. Prescott Hewett, or to the hon. secretary, Mr. George Eastes, M.B., 69, Connaught Street, Hyde Park Square, W.